



# **Health Care for the Homeless**

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### **Bibliography #9**

#### **IV Drug Use and HIV/AIDS Among Homeless People**

**November 2001**

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## 2001

Hughes RA. **The lives of drug injectors and English social policy.** JI of Health and Social Policy, 13(2):75-91, 2001.

The lives of drug injectors are characterized by a number of personal, social and economic circumstances, which are linked to the tenets of social policy. Prior to the emergence of HIV and AIDS little research was directed towards understanding the lives and behavior of drug injectors. However, more was learned about the virus and the ways in which people behave, drug injectors became an important focus for research and policy making in relation to HIV and AIDS. However, there are wider life issues outside of those of HIV and AIDS that also affect drug injectors. This paper highlights some of these considerations and the value of a holistic approach to understanding drug injectors' lives in social policy; an approach that could usefully be applied to other groups of people.

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Lopez-Zetina J, Kerndt P, Ford W, Woerhle T, Weber M. **Prevalence of HIV and hepatitis B and self-reported injection risk behavior during detention among street-recruited injection drug users in Los Angeles County, 1994-1996.** Addiction, 96(4):589-95, Apr 2001.

This study's aim is to describe injection risk behaviors while in detention in a sample of injection drug users (IDUs) in Los Angeles County. Cross-sectional, interviewer-administered, face-to-face risk survey, and serological screening for HIV and hepatitis B were conducted at four street locations in Los Angeles County between 1994 and 1996. All interviews were conducted in a non-institutionalized setting. Measurements included ascertainment of self-reported risk behavior during detention and screening for HIV and hepatitis B surface antigen (HbsAg) and antibody to the core (HbcAb) seromarkers. Six hundred and forty-two participants were street recruited during the study period. Seventy-one percent of the sample was male, the median age was 43 years, 61% were African-American, 27% were Latino, 8% were white and 36% considered themselves homeless. Overall HIV prevalence was 3.0%; 3.1% tested positive for the hepatitis B surface antigen marker (HbsAg), and 80.3% for antibody to hepatitis B core antigen (HbcAb). After adjustment for length of injection drug use and recency of release from detention, HIV seroreactivity was significantly associated with history of detention due to possession of IDU paraphernalia. The presence of the hepatitis B HbcAb seromarker was associated with injection drug use while in detention, and having been ever arrested for possession of IDU paraphernalia. IDU detainees constitute a high-risk group for blood-borne infections. Comprehensive prevention and health promotion efforts in the community need to include correctional facilities.

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Sears C, Gudyish JR, Weltzien EK, Lum PJ. **Investigation of a secondary syringe exchange program for homeless young adult injection drug users in San Francisco, California, U.S.A.** J Acquir Immune Defic Syndr, 27(2):193-201, June 2001.

This study investigated an HIV prevention program for homeless young adult injection drug users (IDUs) that combined a secondary syringe exchange program (SEP) with community-level activities. Homeless young IDUs were recruited from street-based settings in San Francisco, and a structured questionnaire was administered. The secondary SEP operated in a circumscribed geographic area, and for analytic purposes respondents were assigned to the intervention site group if they primarily spent time in this area (n = 67), or the comparison site group if they primarily spent time elsewhere (n = 55). Almost all (96%)

intervention site youth had used the secondary SEP in the past 30 days and were significantly more likely to regularly use SEP. In bivariate analysis, comparison site IDUs were more likely to share syringes, reuse syringes, share the cotton used to filter drugs, and use condoms with casual sex partners only inconsistently. In multivariate analysis, comparison site remained positively associated with sharing syringes (adjusted odds ratio [AOR], 3.748; 95% confidence interval [CI], 1.406-9.988), reusing syringes (AOR, 2.769; 95% CI, 1.120-6.847), and inconsistent condom use with casual sex partners (AOR, 4.825; 95% CI, 1.392- 16.721). This suggests that the intervention was effective in delivering SEP services to homeless young adult IDUs, and that IDUs who frequented the intervention site had a lower HIV risk than comparison group IDUs.

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Sension MG, Farthing C, Shaffer AG, Graham E, Siemon-Hryczyk P, Pilson RS. **Challenges of antiretroviral treatment in transient and drug-using populations: the SUN study.** AIDS Patient Care STDS, 15(3):129-36, Mar 2001.

This is an open-label, single-arm, phase 3b study (part of phase 3 development) to evaluate the efficacy and safety of Fortovase-soft gelatin formulation (saquinavir-SGC), combined with zidovudine (ZDV) and lamivudine (3TC), human immune deficiency virus type 1 in (HIV-1)-positive, antiretroviral-naive individuals. Forty-two HIV-1-positive adults with plasma HIV RNA >10,000 copies per milliliter (Roche Amplicor HIV Monitor assay) and CD4 cell count >100 cells/mm<sup>3</sup> were treated with SQV-SGC, 1200 mg three times per day; ZDV, 300 mg; and 3TC, 150 mg each twice per day for 48 weeks. High proportions were drug users (26%), demonstrated psychiatric disorders (alcohol abuse [14%]/depression [14%]), or were inadequately housed (5%). At 48 weeks, 50% of patients achieved viral suppression <400 copies per milliliter with 43% <20 copies per milliliter using an intent-to-treat analysis (missing values counted as virological failures). Corresponding proportions for patients remaining on therapy at 48 weeks were 91% <400 copies per milliliter and 78% <20 copies per milliliter. Most adverse events were mild. Saquinavir-SGC combined with ZDV and 3TC, achieved potent and durable HIV RNA suppression and was well tolerated over 48 weeks in an antiretroviral-naive population including high proportions of individuals considered difficult to treat, such as drug users, people with psychiatric problems and homeless individuals.

<b>2000</b>
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Lee D, Ross MW, Mizwa M, Scott DP. **HIV risks in a homeless population.** Int J STD AIDS, 11(8):509-15, Aug 2000.

Homeless people are one of the most vulnerable with regard to HIV transmission. However, most research on this population has been carried out on samples from health clinics. We surveyed 390 homeless people in Houston at a day shelter with regard to their HIV/AIDS knowledge and risk behaviours. The sample was 76% African-American, 11% Euro-American, with small numbers of Latin-Americans, Native-Americans and Asian-Americans: half were born in Texas, and 92% were male. Data indicated that HIV/AIDS knowledge was higher in those who were at higher behavioural risk, although the direction of causality in these cross-sectional data cannot be inferred. African-Americans were at slightly higher risk. Compared with previous clinic samples, this sample was older and a higher number (one-third) slept the last night outside. Eighty per cent had had an HIV test. Condom use was low with

both males and females most commonly not reporting using condoms although more than half had had sexual contact in the past month. Multivariate analysis indicated that ethnicity and HIV/AIDS knowledge were independent predictors of risk behaviour. Lifetime risks included one-third who had injected drugs (and shared needles), and nearly 10% had had sex with someone they knew to be HIV seropositive. Lack of future time perspective rather than level of knowledge may be a barrier to reducing HIV risks, and the data are discussed in terms of policy implications and homelessness.

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Logan TK, Leukefeld C. **HIV risk behavior among bisexual and heterosexual drug users.** J Psychoactive Drugs, 32(3):239-48, Jul-Sept 2000.

This study examined the sexual and drug use behaviors for bisexual and heterosexual drug users (n=11,435 males and n=5,636 females) who participated in the NIDA AIDS Cooperative Agreement study. Results of the study suggest that, for males, bisexuality was highly associated with being homeless, having ever been paid for sex, having five or more sex partners in the month preceding the interview, having an IV drug-using sexual partner in the month preceding the interview, using crack, and sharing injection equipment in the month preceding the interview. For females, bisexuality was associated with ever having been arrested, past substance abuse treatment, ever having been paid for sex, ever having paid for sex, having five or more sexual partners in the month preceding the interview, ever using cocaine, and sharing injection equipment in the month preceding the interview. Overall, results from this study indicate that both male and female bisexuals, when compared to heterosexuals, were at higher risk for HIV and were more likely to be HIV positive. One implication of these results is that a universal prevention message may not be as effective as targeting prevention messages specifically for bisexual males and females.

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Shah NG, Celentano DD, Vlahov D, Stambolis V, Johnson L, Nelson KE, Strathdee SA. **Correlates of enrollment in methadone maintenance treatment programs differ by HIV-serostatus.** AIDS, 14(13):2035-42, Sep 2000.

**OBJECTIVES:** To identify correlates of enrollment in methadone maintenance treatment programs (MMTP) among a prospective cohort of injection drug users (IDUs) in Baltimore, Maryland. **METHODS:** A total of 1480 IDUs undergoing semi-annual HIV tests and interviews were studied between 1994 and 1998, during which time a needle exchange program was introduced. Longitudinal analysis using generalized estimating equations was used to identify correlates of MMTP participation over time. **RESULTS:** Although similar proportions of HIV-seropositive and -seronegative IDUs enrolled in MMTP during follow-up (26 versus 22%, respectively), correlates of enrollment differed by HIV-serostatus. Among HIV-seropositive participants, older age [adjusted odds ratio (AOR, 1.37)] was associated with enrollment in MMTP. Among HIV-seronegative IDUs, factors associated with not enrolling in MMTP were being African American (AOR, 0.22) and having been recently incarcerated (AOR, 0.62) or homeless (AOR, 0.72). In both groups, females were twice as likely to be enrolled in MMTP, and those with Medicaid were 1.5 times more likely to be enrolled. When behavioral factors were lagged one visit, needle exchange program attendance was positively associated with MMTP enrollment among HIV-negative IDUs (AOR, 2.10); however, this association diminished significantly over time as dedicated treatment slots for needle exchange program participants became saturated. **CONCLUSIONS:** These findings underscore the need to improve access to MMTP, especially to certain subgroups such as African-Americans, the homeless, incarcerated and uninsured. Our data suggest that health care providers and needle exchange programs can facilitate enrollment into MMTP provided that adequate treatment slots are consistently available to this particularly vulnerable population.

Song JY, Safaeian M, Strathdee SA, Vlahov D, Celentano DD. **The prevalence of homelessness among injection drug users with and without HIV infection.** J Urban Health, 77(4):678-87, Dec 2000.

Cross-sectional investigations of homelessness have many potential biases. Data from 2,452 individuals enrolled in a longitudinal cohort study of Baltimore, Maryland, residents recruited in 1988-1989 with a history of injection drug use were analyzed to identify the extent and determinants of homelessness. Proportions having ever experienced homelessness were compared across subgroups of injection drug users (IDUs) who were human immunodeficiency virus (HIV) negative, HIV positive, and HIV seroconverting. Logistic regression identified independent predictors of homelessness. In the cohort, 1,144 (46.7%) participants experienced homelessness during the course of the study. There were differences in prevalence of homelessness by serostatus: 42.4% (n = 621) of participants who remained HIV negative were ever homeless, while 50.6% (n = 346) of HIV-infected individuals and 58.9% (n = 178) of those who seroconverted during the study were ever homeless (P < .001). Participants who consistently denied active injection drug use during follow-up were unlikely to experience homelessness (19%). Independent predictors of homelessness were male sex, HIV seroprevalence, and HIV seroconversion. Following participants over time captures more experiences of homelessness than cross-sectional studies and more accurately identifies risk characteristics. Our data suggest that homelessness is a significant problem among IDUs, especially those with HIV/AIDS.

## 1998

Diaz T, Chu SY, Weinstein B, Mokotoff E, Jones TS. **Injection and syringe sharing among HIV-infected injection drug users: implications for prevention of HIV transmission. Supplement to HIV/AIDS Surveillance Group.** J Acquir Immune Defic Syndr Hum Retrovirol, 18 Suppl 1:S76-81, 1998.

Because HIV-infected injection drug users (IDUs) can transmit HIV infection, we investigated factors associated with sharing of syringes among IDUs infected with HIV. We analyzed data from an interview survey of 11,757 persons  $\geq$  18 years of age with HIV or AIDS between June 1990 and August 1995 who were reported to 12 state or city health departments in the United States. Of the 1527 persons who had ever shared syringes and reported injecting in the 5 years before the interview, 786 (51%) had injected in the year before interview, and of these, 391 (50%) had shared during that year. IDUs who were aware of their HIV infection for  $>1$  year were less likely to share (43%) than those who were aware of their infection for 1 year or less (65%). The only statistically significant time trend was that the proportion of IDUs from Connecticut who shared decreased from 71% in 1992 to 29% in 1995. This trend appears to be related to the 1992 changes in Connecticut laws that allowed purchase and possession of syringes without a prescription. Because many HIV-infected IDUs continue to inject and share, prevention efforts should be aimed at HIV-infected IDUs to prevent transmission of HIV. Early HIV diagnosis and access to sterile syringes may be important methods for reducing syringe sharing by HIV-infected IDUs

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Fisk SN. **The Association of Nurses in AIDS Care. Position paper on harm reduction and HIV care for drug users: integrating harm-reduction methods and HIV care.** J Assoc Nurses AIDS Care, 9(3):19-24, May-June 1998.

As the epidemic of HIV disease continues to grow among drug users and their sexual partners, new ways must be adopted to do prevention work, outreach, and service delivery to this population. The Harm

Reduction Model offers methods of working with drug users, which are in contrast to traditional methods based on confrontation and that require abstinence before change can occur. This position paper examines the Harm Reduction Model and outlines areas in which the Association of Nurses in AIDS Care can play a role in the expansion of harm-reduction-based intervention and policies.

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Latkin CA, Mandell W, Knowlton AR, Doherty MC, Vlahov D, Suh T, Celentano DD. **Gender differences in injection-related behaviors among injection drug users in Baltimore, Maryland.** AIDS Educ Prev, 10(3):257-63, June 1998.

Baseline data from 640 injection drug users in the Stop AIDS for Everyone study, an HIV preventive intervention were used to examine gender differences in self-reports of injection behaviors. In both the bivariate and multivariate analyses men reported injecting alone, in semipublic areas, and at their mother's residence more often than women. In the bivariate analyses, women reported denser personal networks, and in the multivariate analyses, women reported significantly greater overlap between their drug and sex networks. These data suggest that this overlap of sex and drug networks may reduce women drug injectors' ability to adopt and maintain HIV protective behaviors. The data also suggest that interventions need to address gender differences in the social context of risk behaviors.

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Rahav M, Nuttbrock L, Rivera JJ, Link BG. **HIV infection risks among homeless, mentally ill, chemical misusing men.** Subst Use Misuse, 33(6):1407-26, 1998.

This article attempts to identify the specific role that each of three conditions afflicting homeless, mentally ill, chemically misusing (HMICM) men plays in exposing these men to the risk of HIV infection. Three hundred and fifteen HMICM men (33 of whom were HIV positive) were interviewed on IV drug use (IVDU) and sex practices. Two scales of risky IVDU and sex conducts were constructed and analyzed in relation to HIV status. Strong correlations were found between IVDU practices and HIV seropositivity, and between risky sex conduct and HIV seropositivity. Serious depression was the strongest predictor of risky IVDU practices. Prolonged homelessness was the condition most associated with risky sex conduct. The authors conclude that HMICM men are at high risk for HIV infection, stemming predominantly from two conditions: depression, leading to risky IVDU practices, and homelessness, leading to risky sexual conduct.

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Robles RR, Marrero CA, Reyes JC, Colon HM, Matos TD, Finlinson HA, Munoz A, Melendez M, Sahai H. **Risk behaviors, HIV seropositivity, and tuberculosis infection in injecting drug users who operate shooting galleries in Puerto Rico.** J Acquir Immune Defic Syndr Hum Retrovirol, 17(5):477-83, April 15, 1998.

This study looks at HIV risk behaviors, HIV seroprevalence, and TB infection in shooting gallery managers in Puerto Rico. The subjects were 464 injection drug users (IDUs), of whom 12.5% reported managing shooting galleries. The median frequency of drug injection was higher in shooting gallery managers than in nonmanagers. A trend was observed for purified protein derivative (PPD) reactivity to increase according to the length of time spent as a gallery manager, but this trend was not statistically significant. However, anergy rates increased significantly with increase in the number of months spent as shooting gallery manager. IDUs reporting shooting gallery management experience of  $\geq 25$  months were more likely to be infected with HIV. Prevention programs need to emphasize strategies to protect the health of shooting gallery clients and, in particular, shooting gallery managers.

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Tortu S, McCoy HV, Beardsley M, Deren S, McCoy CB. **Predictors of HIV infection among women drug users in New York and Miami.** *Women Health*, 27(1-2):191-204, 1998.

In the US, the number of women diagnosed with AIDS continues to increase. In this study, women in New York City (East Harlem) and Miami, two sites with high rates of drug use and HIV infection, were first compared on sociodemographic variables and risk behaviors. Logistic regression analyses were used to identify significant, independent predictors of HIV infection in each city. In comparing women from the two cities, several differences in sociodemographic characteristics and drug use were observed. In both cities, ever exchanging sex for drugs and/or money was predictive of HIV infection; and in East Harlem only, other lifetime risk variables independently predicted HIV infection: drug injection, having a sexually transmitted disease, and not having graduated from high school. Results suggest that intervention efforts with women who exchange sex should be intensified in both cities. Also, further comparisons of women drug users in AIDS epicenter cities are necessary to provide information on similarities and differences in sociodemographic characteristics and individual risk behaviors. More research attention should be focused on examining the social context of HIV risk in order to develop innovative intervention strategies that focus on the link between contextual factors and HIV infection.

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Weeks MR, Grier M, Romero-Daza N, Puglisi-Vasquez MJ, Singer M. **Streets, drugs, and the economy of sex in the age of AIDS.** *Women Health*, 27(1-2):205-29, 1998.

Drug addicted women whose economic and social base is urban streets face limited options for income generation and multiple dangers of predation, assault, arrest, and illness. Exchanging sex for money or drugs offers one important source of income in this context. Yet the legal, social, and safety risks associated with these exchanges reduce the likelihood of regular safer sex practices during these encounters, thereby increasing the risk of HIV infection. Such conditions lead women engaged in sexual exchanges for money to varied and complex responses influenced by multiple and often contradictory pressures, both personal and contextual. Street-recruited women drug users in an AIDS prevention program in Hartford, Connecticut reported a range of condom use when engaging in sex for money exchanges. This paper explores their differences by ethnicity, economic resources, and drug use, and analyzes these and other factors that impact on street risks through sexual income generation. Surveys and in-depth interviews with drug-addicted women sex workers describe their various approaches to addressing multiple risks on the streets and suggest significant effort by women in these contexts to avoid the many risks, including HIV infection.

<b>1997</b>
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Gorman EM, Barr BD, Hansen A, Robertson B, Green C. **Speed, sex, gay men, and HIV: ecological and community perspectives.** *Med Anthropol Q*, 11(4):505-15, Dec 1997.

Fifteen years into the HIV/AIDS epidemic, a great deal is now known about the different populations impacted by the disease, including those affected directly or indirectly by drug use. Anthropology has played a critical role in assisting with this task by identifying hidden populations, developing new methodological approaches, and targeting outreach efforts. In spite of this considerable body of ethnographic knowledge, men who have sex with other men (i.e., MSM, or gay and bisexual men) who use drugs have not received the same research attention as other drug users, despite the fact that they

represent nearly one-fifth of AIDS cases in the U.S. with injection drug histories. In response to the alarming increase in HIV seroprevalence among this population, this ethnographic project provides preliminary data about those who are at dual risk for HIV through both homosexual behavior and injection drug use.

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Page JB. **Needle exchange and reduction of harm: an anthropological view.** Med Anthropol, 18(1):13-33, Dec 1997.

Overwhelming evidence from all over the world confirms that needle exchange programs (NEPs) in widely varied forms have value in prevention of HIV infection among injecting drug users (IDUs). Unfortunately, the United States has relatively few active NEPs because of political opposition to adoption of any policy that would give the appearance of condoning use of illegal drugs. Some additional opposition comes from the affected communities themselves. NEPs that assiduously construct links with affected communities have highest probabilities of effectiveness. Studies of NEPs, with some notable exceptions, still lack anthropological evaluations of their impact, and this deficiency needs more attention in future efforts to frame, implement, and evaluate NEPs.

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Perlman DC, Des Jarlais DC, Salomon N, Masson CL. **Preventing opportunistic infections in HIV-infected injection drug users.** JAMA, 278(21):1743-4, Dec 3, 1997.

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Singer M. **Needle exchange and AIDS prevention: controversies, policies and research.** Med Anthropol, 18(1):1-12, Dec 1997.

This paper reviews the key public health issues, social science research, and policy debates that surround the issue of needle exchange as an AIDS prevention strategy among injection drug users. As worldwide rates of drug use-related HIV infection and injection drug use have continued to rise, there is growing public health pressure to identify effective prevention strategies. Needle exchange, while consistently found to be effective in lowering AIDS risk and in preventing new HIV infection, remains a controversial issue in the U.S. because this "harm reduction" approach fails to condemn drug use, suggesting the underlying moral issues in an increasingly intense public policy conflict.

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Susser E, Betne P, Valencia E, Goldfinger SM, and Lehman AF. **Injection drug use among homeless adults with severe mental illness.** Amer J Pub Health, 87(5):854-6, 1997.

This study examined injection drug use among men and women who are homeless and have serious mental illnesses. The data were drawn from related clinical trials conducted in Baltimore (101 men, 49 women) and Boston (85 men, 33 women). The percentages of homeless men with a history of injection drug use were 26% in Baltimore and 16% in Boston; the corresponding rates among homeless women were 8% and 6%. Taken together, these and previous results suggest high lifetime prevalences of injection drug use- and associated risks of HIV transmission- in this elusive population.



## 1996

Johnson TP, Aschkenasy JR, Herbers MR, Gillenwater SA. **Self-reported risk factors for AIDS among homeless youth.** AIDS Educ Prev, 8(4):308-22, 1996.

The authors describe a study which assessed HIV risk behaviors in a sample of homeless youth in a large urban area and examined factors associated with these behaviors. Self-reported behaviors were assessed via interviews with 196 homeless youth in Chicago in all 10 urban shelters serving this group and in five street locations. Overall, 83.7% reported at least one of these risk factors: multiple sex partners; high risk sexual partners; inconsistent condom use; history of sexually transmitted disease; anal sex; prostitution; and/or intravenous drug use. An index of these behaviors was associated with being male, having unmet personal needs, being interviewed in street locations, and having a history of sexual abuse. Findings suggest that strategies that may decrease risk behaviors among homeless youth include the elimination of their need to rely on illicit activities for income, provision of basic needs, education regarding existing services, increased outreach efforts, and early identification of and protection from childhood sexual abuse.

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Kipke MD, Unger JB, Palmer RF, Edgington R. **Drug use, needle sharing, and HIV risk among injection drug-using street youth.** Subst Use Misuse, 31(9):1167-87, July 1996.

Injection drug use is the second most common HIV risk behavior in the United States, but little is known about injection drug use and needle-sharing behavior among street youth, a group at high risk for HIV infection. This study investigates the drug use histories, injection drug use behaviors, and needle-sharing practices of 106 injection drug using youth in Los Angeles, California. Respondents report high rates of injection drug use and needle sharing, indicating that these youth are at particularly high risk for HIV infection. Results suggest a need for outreach services tailored to the unique needs of injection drug-using adolescents.

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Susser E, Miller M, Valencia E, Colson P, Roche B, Conover S. **Injection drug use and risk of HIV transmission among homeless men with mental illness.** Amer J Psych, 153(6):794-8, 1996.

This study documents a high lifetime prevalence of injection drug use in a group of homeless men with mental illness. Men reported injection drug use and sexual behaviors with high risk of HIV transmission and gave scant evidence of risk-reduction behaviors. Results of interviews with 218 homeless men show: Fifty (23%) had injected drugs; among those 50, 66% shared needles while 64% used shooting galleries; only 22% cleaned needles with a sterilizing agent such as bleach, and 2% used a needle exchange program; in the past six months 48% had unprotected sex with women and 10% had unprotected sex with men. The authors conclude that although these individuals may fall between service systems and may be difficult to reach, they must be included in efforts to prevent transmission of HIV infection.

## 1995

Lebow JM, O'Connell JJ, Oddleifson S, Gallagher KM, Seage GR 3rd, Freedberg KA. **AIDS among the homeless of Boston: a cohort study.** J Acquir Immune Defic Syndr Hum Retrovirol, 8:292-6, Mar 1, 1995.

We wanted to compare demographics, risk behaviors, AIDS-defining diagnoses, and survival between homeless and housed persons with AIDS in Boston from 1983 to 1991. Our retrospective cohort study used chart review to identify homeless AIDS cases and data from the Massachusetts AIDS Surveillance Program for comparison of homeless and nonhomeless cases. Seventy-two homeless and 1,536 nonhomeless Boston residents were reported to have AIDS between Jan. 1, 1983, and July 1, 1991. Homeless persons with AIDS were more likely to be African American or Latino (81% vs. 39%) and have IV drug use as a risk behavior (75% vs. 19%). The AIDS-defining diagnoses among the homeless were more commonly disseminated Mycobacterium tuberculosis (9% vs. 2%) and esophageal candidiasis (17% vs. 9%). These differences were not seen when the populations were stratified by IV drug use. No significant difference in survival between the homeless and nonhomeless cohorts was found. Homeless individuals with human immunodeficiency virus are significantly different than housed persons, and at greater risk of invasive opportunistic infections. Appropriate clinical strategies can be developed to provide needed care to homeless persons with HIV.

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St. Lawrence J, Brasfield T. **HIV risk behavior among homeless adults.** AIDS Educ Prev, 7(1):22-31, 1995.

Very little information is available regarding HIV risk behavior among homeless adults despite increasing evidence that HIV infection disproportionately affects inner-city residents and disadvantaged populations. In this study, adults entering a storefront medical clinic for homeless persons completed an AIDS risk survey. The results suggest that homeless adults are engaging in sexual and substance use behaviors that place them at high risk for HIV infection. Sixty-nine percent of the sample was at risk for HIV infection from either: (1) unprotected intercourse with multiple partners; (2) intravenous drug use; (3) sex with an intravenous drug user; or (4) exchanging unprotected sex for money or drugs. The results suggest that there is an urgent need to develop and evaluate AIDS-prevention strategies for homeless adults.

## 1994

Goodman E, Berecochea JE. **Predictors of HIV testing among runaway and homeless adolescents.** J Adolesc Health, 15:566-72, Nov 1994.

**PURPOSE:** Although runaway and homeless adolescents are at high risk for acquiring HIV infection, little is known about which of these youth obtain HIV testing or whether those considered to be at highest risk are being tested. The purpose of our study was to determine demographic characteristics and risk profiles of runaway and homeless adolescents who had obtained an HIV test and compare them to those who had not been tested. **METHODS:** We analyzed data collected by the State of California from a

survey of 202 San Francisco Bay area runaway and homeless youth aged 13-18 years conducted in 1990-1991. Adolescents were interviewed about AIDS-related knowledge, attitudes, beliefs, and behaviors, including HIV testing experience. RESULTS: Most subjects were 16 years or older (80%), white (61%), sexually active (91%) and heterosexual (82%). Twenty-three percent reported a previous sexually transmitted disease (STD); 27% had used injection drugs. Over half (54%) had been HIV antibody tested. Free/community clinics were the most common site for testing. In a logistic regression model, four variables were independent predictors of having obtained an HIV antibody test: history of an STD, five or more years of sexual activity, injection drug use, and age. CONCLUSIONS: Our study demonstrates that many runaway and homeless adolescents have obtained an HIV antibody test and that those with known risk factors are more likely to have been tested. These data support the need for community-based expansion of HIV-related services for homeless youth. The effects of HIV antibody testing on subsequent beliefs and behaviors need further study.

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Harlow R, Sorge R (eds). **A briefing book: needle exchange, harm reduction, and HIV prevention in the second decade.** New York, NY: ACLU AIDS Project, 1994.

This briefing book is designed to be read and used by advocates of needle exchange and harm reduction. The authors provide practical checklists and recommendations about policy positions as well as descriptive material giving background about HIV prevention for intravenous drug use. Chapter topics include: AIDS and drug use; harm reduction; needle exchange; scientific evidence; politics; policy guidelines; community advocacy; advocacy in court; and legislative advocacy. Also provided are lists of needle exchange, harm reduction, and advocacy programs by state. AVAILABLE FROM: ACLU AIDS Project, 132 West 43rd Street, Box NEP, New York, NY 10036, (212) 944-9800.

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Nyamathi AM. **Barriers to drug and sexual risk reduction among women.** Int Conf AIDS, 10:45 (abstract no. 154C), Aug. 7-12, 1994.

OBJECTIVES: (1) to describe sexual and drug use behaviors and factors that inhibit condom use and needle cleaning among women of color who are intravenous drug users (IVDUs) or partners of IVDUs and (2) to examine whether risky sexual behaviors or barriers to risk reduction differ with ethnicity and acculturation. METHODS: Survey instruments assessing sexual and drug use behavior were administered to 378 homeless and drug addicted women of color. Of the 378 women, 256 (68%) were African-American and 122 (32%) were Latina. All instruments used were culturally revised standardized instruments with well established reliability and validity in the target population. RESULTS: African-American women were more likely than Latinas, to report barriers related to lack of skills in using condoms, inability to get condoms, discomfort and lack of skills in discussing condoms with partners, not thinking about condoms when high, belief that partner did not have AIDS, and could not transmit AIDS to their partner. Low acculturated Latinas were more likely to report partners dislike of condoms. Latinas were also more likely to report that too much time was needed to clean needles and that they were too sick to clean needles. CONCLUSION: The data indicate the need for provision of condoms, and cognitive and behavioral skill enhancement with impoverished women of color. The provision of clean needles for women who are IVDUs are also of importance.

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Rosenthal, D, Moore S, Buzwell S. **Homeless Youths: Sexual and Drug-Related Behaviour, Sexual Beliefs and HIV/AIDS Risk.** AIDS Care, 6(1):83-94, 1994.

This article reports on a study in which homeless, Anglo-Australian and Greek-Australian 16 year olds

were questioned about their sexual behavior and sexual beliefs. Measures of sexual risk-taking included type of behavior, condom use and number of partners. Drug risk was assessed by extent of IV drug use, and sharing and cleaning needles. In addition, motivations for engaging in, or avoiding, sex were elicited. Findings indicated that the behavior patterns of homeless adolescents placed them at considerable risk of HIV infection for both sexual and drug risk, and significantly more so than their home-based peers. Implications for targeted interventions are discussed.

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Watters JK, Molnar BE, Booth RE, Kral AH. **Runaway/homeless street youth in Denver, New York, and San Francisco: determinants of high risk behavior.** Int Conf AIDS, 10:261 (abstract no. PC0414), Aug. 7-12, 1994.

GOAL: To identify factors associated with drug injection and condom use among runaway/homeless youth. METHODS: High-risk street youth 12-19 years old (N=770) were interviewed in three cities in 1992 and 1993. SELECTED RESULTS: The sample was 65% male, 35% female; 54% white, 25% African-American, 14% Hispanic, 7% other races; 21% injection drug users; 87% were sexually active during previous three months. TABULAR DATA, SEE ABSTRACT VOLUME. CONCLUSIONS: Crack use predicted high-risk sex and drug injection behaviors. AIDS prevention programs for high-risk youth should emphasize: (1) the availability, effective use, and regular carrying of condoms; (2) HIV testing and counseling; and (3) effective drug prevention and treatment with special reference to the use of injected drugs and crack cocaine.

## 1993

Empfield M, Cournos F, Meyer I, McKinnon PK, Horwath E, Silver M, Schrage H, Herman R. **HIV seroprevalence among homeless patients admitted to a psychiatric inpatient unit.** Amer J Psych, 150(1):47-52, 1993.

This article is based on a study of HIV seroprevalence among hospitalized homeless patients who are mentally ill. Over a two-year period the authors collected discarded blood samples from patients admitted to a psychiatric unit designated specifically for the care of individuals with serious mental illnesses removed from the streets of New York City. Results indicate that one in every 16 patients admitted to the unit was HIV positive. Characteristics most strongly associated with seropositivity were being under the age of 40 and intravenous drug use. The authors suggest that homeless individuals who are mentally ill require outreach efforts in order to reduce the risk of acquiring or transmitting HIV.

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Friedman SR, Jose B, Neaigus A, Goldstein M, Mota P, Des Jarlais DC. **Multiple minority status as an HIV risk factor among drug injectors.** Int Conf AIDS, 9:811 (abstract no. PO-D05-3560), June 6-11, 1993.

OBJECTIVE: To investigate racial/ethnic patterns of social marginalization risk behaviors, and HIV infection among injecting drug users (IDUs). METHODS: 670 street-recruited New York IDUs were HIV tested and interviewed in 1991 and 1992. The sample was 71% male; 33% white non-Latino, 26% black non-Latino, 33% non-black Latino, 8% black Latino. Data on HIV serostatus are compared to results from a 1984 sample of treatment-recruited IDUs (Marmor et al, AIDS 1, 1987:39-44). RESULTS: 40% of

respondents were seropositive. Seroprevalence among white non-Latinos was 32%; black non-Latinos 42%; non-black Latinos 42%; and black Latinos 57%. (In the 1984 sample, black Latinos also had the highest seroprevalence.) In the 1991-92 street sample, black Latinos are significantly more likely than other blacks or Latinos to be homeless, to have injected drugs in prison, not to be in drug abuse treatment, not to have seen a doctor in the previous six months, to inject in shooting galleries and in outdoors locations, and to sell drugs and syringes. They inject drugs more often, and have more turnover in their drug injection networks. They tend to have heard about AIDS later. **CONCLUSIONS:** Black and Latino minority IDUs are more likely to be infected than whites. Black Latinos remain more likely than other blacks and Latinos to be HIV infected; they engage more in high risk behaviors, they are more isolated from medical information and receive fewer medical and treatment services. Efforts to reduce racial/ethnic social inequality may reduce the spread of HIV among minorities in general and those of multiple minority status in particular.

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Joseph H, Magura S, Rosenblum A. **AIDS risk behavior among IDUS in NYC jails.** Int Conf AIDS, 9:834 (abstract no. PO-D12-3699), June 6-11, 1993.

A random sample of 281 inmates (215 males and 66 females) either in detention or serving a sentence of up to one year while maintained on an in-jail methadone maintenance program were interviewed about AIDS risk behavior. Virtually all were daily injectors of heroin and cocaine. About 70% reported engaging in heterosexual-vaginal, oral and anal sex without using condoms. About 40% report going to shooting galleries and sharing cookers and needles. Although the majority had previous episodes of methadone treatment most reported anxieties rooted in mythology that methadone rots the bones. Ambivalence towards methadone adversely affects admission into treatment and retention with only 50% entering treatment after jail and more than half leaving within a year. This population of jailed, unemployed, homeless drug users remains at high risk for HIV transmission and drug-resistant TB. Massive social and health services with intensive education about AIDS risk behavior, addiction and methadone treatment are needed.

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Woods IP, Downer A. **Community fairs--an intervention designed for drug dependent, homeless, and indigent populations.** Int Conf AIDS, 9:825 (abstract no. PO-D08-3643), June 6-11, 1993.

Substance using, homeless, and indigent populations present unique and insistent challenges to education and prevention providers. Community Fairs were held presenting interventions that were persuasive and appealing to this target population. Strategies were developed which engaged "hard to reach" participants, then unmasked successful AIDS educational forums as the desired outcome. Two Community Fair models reviewed: targeting homeless women in Brooklyn, N.Y., January 1989 through October 1989; targeting intravenous drug users, homeless, and indigent at risk populations in Seattle, Wash., April 1990 through December 1992.

## 1992

Abdul-Quader AS, Des Jarlais DC, Tross S, McCoy E, Morales G, Velez I. **Outreach to injecting drug users and female sexual partners of drug users on the lower east side of New York City.** Br J Addict, 87:681-8, May 1992.

In 1984, outreach to injecting drug users and their female sexual partners, was initiated as part of HIV behavioral research projects. HIV, health, drug treatment and family planning information and services were provided in addition to recruiting subjects to the research program. Such outreach poses certain problems, especially potential disruption of neighborhood day-to-day life and clashes with police. This paper discusses an outreach program to injecting drug users and their female sexual partners that was initiated in New York City to provide HIV-related information and services. We examine successes and problems in conducting outreach to persons who are typically not accessible through formal institutional channels.

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Abdul-Quader AS, Tross S, Silvert H, Simons P, Friedman SR, Des Jarlais DC. **Peer influence and condom use by female sexual partners of injecting drug users in New York City.** Int Conf AIDS, 8:D468 (abstract no. PoD 5489), July 19-24, 1992.

**OBJECTIVES:** Previous research has shown that community peer influences are strong factors in changing behavior. Using a social influence model, predictors of current condom use and future intentions to use condoms among female sexual partners (FSP's) of injecting drug users were examined. **METHODS:** 346 FSP's who have had sex with IVDUs but not injected drugs within 30 days were recruited from two public housing projects, to assess condom use behaviors and intentions during vaginal sex with their primary partners (PPs). **RESULTS:** 20% of the subjects were black and 80% were Hispanic. Mean age was 33 years. Thirty-seven % had injected drugs in the past. Those who were Hispanic; knew women who use condoms with their PPs; and have someone important who strongly supports condom use were more likely to use condoms with their PPs. Intention to use condoms in the future was associated with two factors: knowing women who use condoms with their PPs and having someone who strongly thinks that they should use condoms with their PPs. Variables that were not significant include: having ever injected drugs, having exchanged sex for money or drugs, or having been tested for HIV. **CONCLUSIONS:** As has previously been reported (Abdul-Quader, et al, 1990; Emmons CA, et al, 1986; Friedman, et al, 1987; O'Reilly, et al, 1989; Schnell, et al, 1991) community support and social norms affect behavior change and intentions to reduce the risk of HIV among IVDUs and gay men. These results support community-based intervention programs using peer influence and social norms to reduce HIV risk behaviors among FSP's.

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Hoadley D, Wahaj M, Forster A, Dean H, McCaffery K, Lutz B. **Demographic differences in HIV-related knowledge among homeless adults in New Orleans, Louisiana.** Int Conf AIDS, 8:D529 (abstract no. PoD 5841), July 19-24, 1992.

**OBJECTIVE:** To determine if differences exist in HIV-related knowledge, attitudes, and practices among homeless adults of different demographic groups in New Orleans, La. **METHODS:** Over 250 questionnaires completed by patients attending the City of New Orleans Healthcare for the Homeless Clinic were reviewed. **RESULTS:** No significant differences were found in attitudes or practices when

analyzed according to age, race, or sex, but responses to 5 out of 11 knowledge questions demonstrated significant differences according to race. A smaller percentage of African-American patients than white patients knew that needle-sharing can transmit AIDS, that condoms lower the risk of transmission, that transmission can occur from asymptomatic individuals, that AIDS decreases the ability to fight off diseases, and that AIDS is caused by a virus called HIV. **CONCLUSIONS:** Demographic differences exist in HIV-related knowledge among adults attending the New Orleans Health Dept. Clinic for the Homeless. Factors that affect HIV-related knowledge among African-Americans, such as access to information or educational opportunities, warrant further study.

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Lebow J, Retondo M, Samet JH, Freedberg KA, Libman H. **Initial presentation of HIV-infected homeless persons for primary medical care.** Int Conf AIDS, 8:D511 (abstract no. PoD 5734), July 19-24, 1992.

**OBJECTIVES:** Homeless individuals often have many competing priorities such as food, shelter, and substance abuse with which to contend in addition to their health care. We sought to determine if homeless persons present for primary medical care later in the course of HIV infection than the non-homeless. **METHODS:** Data were prospectively collected at presentation of patients without prior primary care to the HIV Diagnostic Evaluation Unit (DEU), an assessment and triage clinic, between 2/90 and 10/91. Clinical, laboratory, and psychosocial parameters were assessed. Individuals living on the street or in shelters at the time of intake were included in the homeless group. Variables including CD4 count, time between HIV antibody test and presentation (treatment delay time), demographics, HIV risk factors, drug use, and symptoms at presentation were compared between the homeless and non-homeless. **RESULTS:** Homeless persons accounted for 20% (48/240) of those presenting to the DEU. Of the homeless, 40% were white and 19%-women and 29% presented with CD4 cells less than 200/mm<sup>3</sup>. These characteristics were not significantly different from the non-homeless. IV drug use was reported in 87% of the homeless compared to 44% in non-homeless. Homeless persons were more likely to be actively using heroin, alcohol or tobacco, and have a current or past psychiatric problem. Small differences between the homeless and non-homeless groups were found in mean CD4 count (386 cells/mm<sup>3</sup> vs 323 cells/mm<sup>3</sup>) and treatment delay (386 vs. 292 days) but this did not achieve statistical significance. The homeless were not more likely to be symptomatic at presentation. **CONCLUSIONS:** Contrary to expectations, we found that homeless individuals presented for primary care at a similar stage of HIV infection as the non-homeless. In addition, homeless and non-homeless both delay presentation to primary care after initial notification of HIV infection.

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Morfini H, Doll J, Ruch M, Gonzalez F, Chelveder V. **Social housing for HIV, IVDU patients.** Int Conf AIDS, 8:110 (abstract no. PuB 7369), July 19-24, 1992.

**OBJECTIVE:** To put long-term shelter at the disposal of homelessness patients, those recently released from prison and those not fully integrated socially. The main aim is to provide them with health care and to a lesser extent, deal with the problem of drug abuse. Most patients affected by this project are intravenous drug user (IVDU) patients without need for hospitalization. **METHODS:** Provide patients with one-room flats. Financing can be covered in part or totally, according to the patient's resources, by public funds from both the central government (D.G.S.--Division Sida) and the district governments (Conseil General des Yvelines) via two local associations (le Lien Yvelinois et Info-Soins). The medical and psychosocial follow-up of these patients is assured by the members of Info-Soins and the referral service of hospitals or/and the treating doctor. **RESULTS:** The experiment began in March 1990. In 1990, two apartments were put at patient's disposal. In 1991, four; in 1992, one. The total number of patients covered so far is nine (some of the original patients have since died). Of the original group of nine, all

were drug abusers and four had just been released from prison. All had CD4 count below 200, with AZT and primary prevention treatments. Their follow-up, in comparison with the control group, reveals the following: (1) a net improvement in medical care and treatment, reduction of IVDU, while maintaining a self-sufficient life-style and satisfactory comfort unconstrained by material concerns and (2) no discrimination, as a result of being distributed anonymously throughout society. **CONCLUSIONS:** Resolution of the housing issue through the dispersed set up of patients in society; clear improvement of medical and psychosocial care, but incomplete resolution of drug abuse. The program's disadvantage is the loneliness experienced by patients, often forgotten by families.

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O'Neill J. **Integrating HIV/AIDS early intervention and treatment and substance abuse treatment into primary care delivery system--a U.S. Public Health Service experience.** Int Conf AIDS, 8:D521 (abstract no. PoD 5795), July 19-24, 1992.

**OBJECTIVES:** To describe the impact of two U.S. Public Health Service initiatives enabling primary care providers to serve HIV-infected patients, substance users, and patients needing experimental therapies for HIV infection. **METHODS/RESULTS:** Title III of the Ryan White CARE Act infused nearly \$45 million into HIV prevention and ambulatory care services for patients of community health centers, homeless programs, family planning agencies, hemophilia treatment centers, local government health department clinics, and hospital outpatient departments. Analysis of first year data indicate that such organizations can successfully provide services to hard-to-reach populations: An estimated 81,000 patients received prevention and/or treatment services in 1991. Fifty percent were minority, 20% to 25% were intravenous drug users (IVDUs), 25% reported heterosexual transmission as the primary risk factor and 40% were female. Surveys, directed discussions, site reviews and other methods yielded information relative to barriers in implementation of such programs, cost information and barriers in linking with AIDS clinical trials. A second \$9 million program linking primary care and substance abuse treatment has likewise been successful. Over 8,000 patients have been served. Thirty-three percent of patients agreeing to be tested were HIV positive. **CONCLUSIONS:** Primary care organizations can be successful providers of HIV and substance abuse services if adequately supported. There are, however, inherent barriers to be understood and addressed. These programs have particular importance for minority populations, women and those at risk for HIV infection from substance abuse.

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Pennbridge JN, Freese TE, MacKenzie RG. **High-risk behaviors among male street youth in Hollywood, California.** AIDS Educ Prev, Suppl:24-33, Fall 1992.

High-risk sex and drug use behaviors are examined among 446 male street youth, age 14 - 23, in Hollywood, Calif., the area in Los Angeles County with the highest number of AIDS cases. Comparisons are made based on whether the sex behaviors occurred in situations of "survival sex" ("sex you gotta do") and "recreational sex" ("sex you wanna do"). Ninety-seven percent of the males were sexually active, with 27.1% involved in prostitution in the last three months. Involvement in prostitution is most common among older, gay identified males. The most prevalent risk factors seen among this group include inconsistent condom use (which also varies by social situation), high-risk sexual behaviors during both survival and recreational sex, large numbers of sexual partners, intravenous drug use, and the use of drugs and alcohol during all sex.

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Rapaport S, Bonina J, Scully E. **Primary care of homeless persons with HIV infection: Worcester, Massachusetts.** Int Conf AIDS, 8:D507 (abstract no. PoD 5713), July 19-24, 1992.

ISSUE/PROBLEM: Extreme poverty and homelessness among persons with HIV infection have left many beyond the sphere of the traditional health care system in the United States. We describe the efforts of one project to address their needs. DESCRIPTION OF PROJECT: Ours is a community based agency that provides services to homeless persons in Worcester, Mass. (population 170,000). Outreach clinics with physician and/or nurses serve area shelters and soup kitchens. Case managers provide advocacy for housing, linkage to substance abuse treatment, and acquisition of government benefits for the disabled. RESULTS: The records of 69 persons with HIV were reviewed (32% women, 52% Hispanic, 34% white, mean age 34, range 22-56). Eighty-eight percent lacked regular, adequate night-time residence. Of these, 37% were in shelters, 6.5% on the streets, and 56.5% doubled-up with others. Thirty percent had been in jail within the previous six months. Intravenous drug use was the risk behavior in 90% (67% actively using at intake); 6% reported heterosexual transmission. At intake, 57% were asymptomatic, 40% symptomatic, and 3% had AIDS. Mean CD4 count was 314 cells/mm<sup>3</sup>. Forty-six percent were anemic, 28% leukopenic, and 19% had thrush. Sixty-three percent were prescribed zidovudine; most were judged compliant based on clinical impression (e.g., the presence of macrocytosis). LESSONS LEARNED: HIV infected homeless persons face many barriers in accessing care, chief among them lack of income and health insurance and the instability inherent in their condition. Our experience demonstrates that HIV primary care can be provided to this population. To be effective, a capacity for outreach and a multidisciplinary approach that links social services to the provision of health care are crucial.

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Rockwell R, Sotheran JL, Wenston JA, Friedman SR, Des Jarlais DC. **Homelessness, race, and HIV testing among IDUs in New York City.** Int Conf AIDS, 8:D512 (abstract no. PoD 5740), July 19-24, 1992.

OBJECTIVES: To determine the effect of race and homelessness on the level of HIV testing, which is the necessary first step in obtaining early medical treatment. METHODS: 1,423 subjects (300 white, 618 black, 503 Hispanic; 75% male) were recruited from street and detox ward settings and interviewed as part of the WHO multi-city study on drug injecting behavior. RESULTS: There was a significant difference in testing by homelessness (with home 58%, without home 45%). There were significant racial differences in testing (whites 62%, Hispanics 54%, blacks 48%), and in homelessness (whites 26%, blacks 36%, Hispanics 23%). For the overall sample significant predictors for HIV testing were race (black, Hispanic, with white as reference group), and homelessness, as well as female gender, AIDS education and ever talking with family about AIDS. Significant interactions were found between being black and homelessness. It was found that homelessness was a significant predictor among blacks, but not whites or Hispanics. Testing for those with and without homes found that being black was a strong negative predictor of testing for the homeless sample, while being black was of marginal significance in the sample of people with homes. CONCLUSIONS: Race and homelessness (which is significantly greater among blacks) are strong predictors of HIV testing. Moreover, the impact of homelessness on testing is felt mainly among blacks. This may result in unequal access to early medical care for HIV.

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Schilling RF, el-Bassel N, Gilbert L. **Drug use and AIDS risks in a soup kitchen population.** Soc Work, 37:353-8, July 1992.

Untreated substance users remain beyond the reach of most acquired immune deficiency syndrome (AIDS) prevention efforts. In an effort to describe the risk behavior and attitudes of this population, the authors conducted interviews with 148 drug users in an urban soup kitchen. The study focused on

subjects' risk-taking and risk-reduction behavior related to injection drug use, perceived changes in risk behavior, perceived risk for contracting AIDS, and socioeconomic and attitudinal correlates of injecting and sharing needles. Study findings underscore the need for community-based AIDS prevention strategies to intervene with high-risk populations beyond the reach of drug treatment and AIDS prevention programs.

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Stern LS. **Self-injection education for street-level sex workers.** Int Conf AIDS, 8:D498 (abstract no. PoD 5658, July 19-24, 1992.

ISSUE/PROBLEM: Many sex workers “stroll” to support a drug habit. Although these individuals may be at risk for HIV, they have more immediately threatening occupational and drug-related risks. AIDS education as it is normally delivered rarely satisfies the perceived needs of this population as it fails to address the more visible, stigmatizing and demanding aspects of their lives. DESCRIPTION OF PROJECT: Simple individually tailored lessons of self-injection, health maintenance and safer professional sex were designed for and delivered to a (mostly homeless) group of prostituting injection drug users in the Bronx, New York and Rotterdam, The Netherlands. AIDS education was built into all lessons, but the primary focus was on daily living skills. RESULTS: Information on competent self-injection, track mark prevention, and safer professional sex was eagerly received. Many individuals found the time, effort and anxiety previously associated with and devoted to sex work and injecting drugs diminished. Physical appearance notably improved, and non-drug related interests and self-confidence grew. LESSONS LEARNED: Offering practical, non-judgmental and immediately applicable health maintenance tips helps establish productive relationships with marginalized and stigmatized individuals. When tied to everyday personal issues, AIDS information becomes more relevant and AIDS education is better received.

## 1991

el-Bassel N, Schilling RF. **Drug use and sexual behavior of indigent African American men.** Pub Health Rep, 106:586-90, Sept-Oct 1991.

A total of 108 African American men in a free lunch program with histories of drug abuse were surveyed to determine the relationships among drug use, sexual activity, AIDS prevention practices, and perceived risk of AIDS. Of the 108, 69.5% were homeless and only 12% were currently receiving drug abuse treatment. More than half of the participants had injected drugs, and 38% had shared needles. Among the 80% who were sexually active, 40% reported using condoms every time they had sex. Respondents in monogamous relationships tended to use condoms less frequently. Those who shared needles were more likely to have sex with IV drug users and had more sexual partners. Respondents who used crack used condoms less frequently. Those with multiple partners were more likely to engage in anal intercourse. Three-quarters perceived themselves at risk of AIDS.

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Hardy M, El-Sadr W, Guity C, Traynor M, Capps L, Khanyile C, Paul E, Fuentes L. **A successful recruitment effort for clinical trials on AIDS amongst difficult to reach HIV-infected populations in Harlem; the homeless, substance users and women.** Int Conf AIDS, 7:38 (abstract no. W.D.62), June 16-21, 1991.

**OBJECTIVE:** The Harlem AIDS Treatment Group (which includes two hospital-based clinics, five community clinics, four methadone treatment programs and a homeless men's shelter) was established to provide HIV-infected African American and Latino men and women with the opportunity to participate in clinical trials for AIDS. In order to introduce and promote this new concept to the patients and the providers in the community, a marketing plan was developed. **METHODS:** An assessment was made of the following: - attitudes, both negative and positive, of the patients and providers toward space, equipment/level of HIV knowledge of the providers and patients/HIV prevalence amongst patients at each site/the roles of the providers at each site/concerns regarding confidentiality and patient's right/medical and social priorities of the patients/available community-based organizations, media resources and referral mechanisms/technical and logistical expertise of an advisory committee. **RESULTS:** A successful marketing plan, including a video and brochures, that is tailored to the needs at the different sites and that addresses the concerns of the patients and the providers in Harlem will be presented.

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Levine RN, Dzibur V, Sparks V, Lane SR, Ruiz K, Freeman M. **The San Francisco AIDS Outreach Program to the homeless.** Int Conf AIDS, 7:394 (abstract no. W.D.4024), June 16-21, 1991.

**OBJECTIVE:** To provide comprehensive outpatient services to an HIV-infected inner city population suffering multiple additional diagnoses, including homelessness, IV drug use, and mental illness. **METHODS:** We have developed a multidisciplinary AIDS Outreach Program including medical, nursing, mental health and social services. A centrally located primary care clinic with two hospice affiliations, and in cooperation with the County Hospital, is supported by outreach services which are street-based, located in shelters for the homeless, and in hotels serving transients. **RESULTS:** In two years we have had medical contacts with 555 people cumulatively, with an average of 9.3 visits per patient. Of the total patients: 43% availed themselves of psycho-social services; 94% are male and 6% are female; 77% are identifiable as homeless; and 84% self-identify as IV drug users. Of 506 people with documented HIV seropositivity 71% are symptomatic and 21% have an AIDS diagnosis. Most recent CD4 counts revealed 33% of people with less than 200 cells/mm<sup>3</sup>, 41% with 200-500, and 26% greater than 500. Of those patients with CD4 less than 500, 83% have been prescribed AZT. Of those with CD4, 81% have had some form of PCP prophylaxis. **CONCLUSIONS:** When services are provided in a respectful, flexible, and culturally sensitive way, primary care for HIV-infected people, with multiple catastrophic diagnoses including homelessness, is possible.

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Popkin SJ, Johnson WA, Clatts M, Wiebel WW, Deren S. **Homelessness and risk behaviors among IVDUs in Chicago and New York.** Int Conf AIDS, 7:391 (abstract no. M.D.4004), June 16-21, 1991.

**OBJECTIVES:** To document the nature and extent of homelessness among intravenous drug users (IVDUs) and to examine the relationship between housing status and risk behaviors from initial assessment to six-month follow-up in prospective cohort studies in Chicago and New York City (NYC). **METHODS:** In Chicago, indigenous field workers at three sites recruited IVDUs not in drug treatment (n=888) for structured interviews. In NYC, outreach workers recruited subjects (n=954) from the streets and a hospital. The subjects' social networks and communities were studied. Subjects were grouped into three housing categories: (1) homeless, living in shelters or on the streets; (2) unstable, sharing housing temporarily; and (3) stable, having own apartment or house. Groups were compared on demographics,

drug injection behavior, and risk behaviors including use of shooting galleries and sharing and cleaning injection equipment. RESULTS: Twenty three percent of Chicago IVDUs were homeless and 29% in unstable housing at the initial interview. NYC figures were 16% homeless and 46% unstable. Homeless IVDUs were significantly more likely to report engaging in high risk behavior at both time points. IVDUs in unstable housing reported more risk behaviors than those in stable situations. CONCLUSIONS: These findings have serious implications for interventions aimed at reducing risk of HIV infection among IVDUs. They suggest that the majority of IVDUs face homelessness or unstable housing, which leads to higher rates of risky behaviors.

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Siegal HA, Carlson RG, Falck R, Li L, Forney MA, Rapp RC, Baumgartner K, Myers W, Nelson M. **HIV infection and risk behaviors among intravenous drug users in low seroprevalence areas in the Midwest.** Am J Public Health, 81:1642-4, Dec 1991.

We studied behavioral factors that place intravenous drug users at risk for the acquisition and transmission of the human immunodeficiency virus (HIV) in a sample of 855 individuals not in drug treatment, living in central and southwestern Ohio. The HIV seropositivity rate for the sample was 1.5%. Three factors were significantly related to HIV infection: homeless shelter residence, travel to northeastern HIV hyperendemic areas, and recent male homosexual or bisexual behavior.

## 1990

Abdul-Quader AS, Tross S, Des Jarlais DC. **Condom use among heterosexually active street recruited IVDUs in NewYork City.** Int Conf AIDS, 6:225 (abstract no. S.C.546), June 20-23, 1990.

OBJECTIVE: Previous research among intravenous drug users (IVDUs) has shown that sexual risk reduction often lags behind drug use risk reduction. This research reports on condom use at baseline and follow-up on a sample of street recruited IVDUs on the Lower East Side of Manhattan. METHODS: 208 heterosexually active IVDUs were interviewed by ex-IVDU outreach workers, at baseline (T1) and at a four-month interval (T2) to assess use of condoms. As part of AIDS prevention outreach activities, education materials and condoms were distributed. Subjects were divided into two groups: those who never used condoms and those who used condoms some or all of the time. RESULTS: Frequency of some condom use significantly increased from T1 (58% of the subjects) to T2 (69%). Fifty percent of the sample used condoms some or all of the time at both T1 and T2. This represents 85% of the sub-sample (n=120) using condoms at T1. Forty-five percent of T1 non-users initiated condom use by T2. Subjects with more than one partner at T1 were more likely to use condoms at T2 than subjects with only one partner at T1. Sex, ethnicity, age, years of injection, drug treatment status and homelessness were not associated with T2 condom use. CONCLUSION: In IVDUs, sexual risk reduction may be becoming more widespread. In a sample of street recruited NYC IVDUs, condom use significantly increased over a four-month period. One-half of the heterosexually active sample used condoms some or all of the time at T1 and T2. This may, in part, be due to condom distribution that was part of an AIDS prevention outreach program.

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Abdul-Quader AS, Tross S, Friedman SR, Kouzi AC, Des Jarlais DC. **Street-recruited intravenous drug users and sexual risk reduction in New York City.** AIDS, 4:1075-9, Nov 1990.

Previous studies have reported that intravenous drug users (IVDUs) have made considerable drug-use risk reduction, but less sexual risk reduction. This paper presents findings about sexual risk reduction by street-recruited IVDUs in New York City, and examines the predictors of sexual risk reduction. Sixty-one percent of these street-recruited IVDUs have initiated deliberate sexual risk reduction in order to avoid AIDS. For the total sample (n=568), as well as for the male IVDUs, specific health belief and social influence factors were significant predictors of sexual risk reduction. For female IVDUs, drug-risk reduction, having a friend or acquaintance who practices sexual risk reduction, and wanting to have a child were significant predictors of sexual risk reduction. These findings suggest the importance of social support and community organization to promote risk reduction.

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Goodloe LP, Tross S, Abdul-Quader AS, Des Jarlais DC, Rosenblum A. **Ethnic differences in HIV knowledge and health beliefs in NYC IVDUs.** Int Conf AIDS, 6:225 (abstract no. S.C.545), June 20-23, 1990.

OBJECTIVE: To examine ethnic differences in AIDS knowledge and health beliefs in NYC intravenous drug users (IVDUs). METHODS: IVDUs, contacted by street outreach workers on the Lower East Side of New York City, were interviewed about HIV knowledge and health beliefs. HIV knowledge was assessed on open-ended questions. METHODS: 544 IVDUs (40% white, 25% black, 35% Hispanic; 69% male, 31% female) were interviewed. HIV Knowledge: whites spontaneously named a greater number of AIDS symptoms than blacks or Hispanics. HIV Health Beliefs: blacks and Hispanics were more likely than whites to believe someone infected with HIV would eventually get AIDS. Blacks were less likely than whites to believe they had been exposed to HIV. Hispanics were more likely than whites or blacks to claim that if they themselves were infected with HIV they would be able to avoid developing AIDS. Taken together, this combination of greater perceived severity and greater perceived self-efficacy in the Hispanics may be viewed as the "optimistic bias" described by Weinstein in health belief studies. CONCLUSIONS: Ethnic differences were obtained in perceived severity of HIV infection, perceived HIV susceptibility, and perceived self-efficacy to avoid AIDS. The HIV health beliefs of both black and especially Hispanic IVDUs were distinguished from those of the white IVDUs by their greater "optimistic bias." This optimism is a positive indication for targeted HIV prevention programs with IVDUs of color.

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Greif GL, Price C, Johnson F. **Establishing a house for the HIV-positive intravenous drug abuser who is homeless: analysis of a closing.** J Psychoact Drugs, 22:351-3, July-Sept 1990.

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Joseph H, Roman-Nay H. **The homeless intravenous drug abuser and the AIDS epidemic.** NIDA Res Monogr, 93:210-53, 1990.

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Kassai M. **Caretaking environments.** NAACOGS Clin Issu Perinat Womens Health Nurs, 1:123-7, 1990.

Recent statistics validate the impact of the Human Immunodeficiency Virus (HIV) on women and children in the United States. An increasing number of women of childbearing age are being infected by sharing needles and syringes with HIV-positive individuals and by having sex with partners who are either known or unknown sources of HIV infection. These women subsequently expose their children to

the virus during pregnancy and at birth. Frequently, these children are both HIV-positive and addicted to drugs. In response to the increasing needs of these women and their children who are frequently homeless, orphaned, or without adequate care, private, municipal, county, and federal groups and agencies have either redefined their services or developed new programs. The dedication of these groups has resulted in care-taking environments and programs that furnish the infected women and children and their families with medical care, physical, emotional, and financial support.

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Neaigus A, Friedman SR, Sufian M, Stepherson B, Goldsmith D, Des Jarlais DC, Mota P. **Peer culture and risk reduction among street IV drug users.** Int Conf AIDS, 6:226 (abstract no. S.C.548), June 20-23, 1990.

**OBJECTIVE:** To analyze the influence of intravenous drug user (IVDU) peer culture on drug and sexual risk reduction. The specific focus is whether risk reduction varies according to whether IVDUs talk about AIDS with IVDU and/or non-IVDU peers. **METHODS:** IVDUs (N=1,169) were recruited through street outreach in New York City in 1988 and 1989. The sample was 39% black, 48% Hispanic, 13% white, and 73% male; mean age was 34. Risk reduction variables include the percentage of times that subjects used bleach, new needles, needles or syringes in sterile wrappers they used only once, and condoms. Questions determined which relatives and friends of subjects were and were not IVDUs and whether subjects had discussed AIDS with them. Reported results are statistically significant at the .05 level by analysis of variance. **RESULTS:** Fully 46% of subjects discussed AIDS with both IVDUs and non-IVDUs, 19% only with IVDUs, 22% only with non-IVDUs, and 13% with neither. Those who discussed AIDS only with IVDUs used bleach 21% of the time while those who discussed AIDS with both used bleach 29% of the time. New needles were used 53% of the time by those who discussed AIDS only with IVDUs compared to 62% of the time for those who discussed AIDS only with non-IVDUs. Using needles from sterile wrappers only once was done 16% of the time for those discussing AIDS only with IVDUs compared to 27% of the time for those who discussed AIDS only with non-IVDUs. Condom use was not significantly related to discussing AIDS with any of the groups. **CONCLUSION:** Two-thirds of IVDUs talk about AIDS with non-IVDUs. Such talk increases somewhat the tendency to safer injection practices. IVDUs who discuss AIDS only with other IVDUs appear to engage in less risk reduction. Thus peer culture, as embodied in discussing AIDS, affects drug-related risk reduction. Interventions to affect the frequency and content of IVDU discussions with non-IVDUs and to provide skills training to make such discussions more effective should be developed.

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Robertson MJ, Koegel P, Grella C. **Homeless adolescents in Hollywood: high risk behaviors for HIV exposure.** Int Conf AIDS, 6:231 (abstract no. S.C.570), June 20-23, 1990.

**OBJECTIVE:** To document the prevalence of high-risk behaviors for HIV exposure among homeless adolescents and their relationship to attitudes and knowledge about AIDS. **METHODS:** Ninety-three adolescents (ages 13-17) were systematically sampled from 30 "street" and service sites of the Hollywood area of Los Angeles County. Knowledge, attitudes, and behaviors related to HIV exposure were assessed. Non-parametric statistics were used. **RESULTS:** About half of the sample (51%) reported at least one high-risk behavior for HIV exposure including intravenous drug use (IVDU) (26%) or sex with an IV drug user (17%), prostitute (18%) or the respondent's own prostitution clients (32%). Many (20%) reported both sex with high-risk partners and IVDU. Risk of exposure was related to duration of homelessness. Knowledge did not insure use of protective behaviors against exposure. **CONCLUSION:** Findings here and elsewhere suggest that homeless adolescents are a high-risk group for both HIV exposure and transmission.

Torres RA, Mani S, Altholz J, Brickner PW. **Human immunodeficiency virus infection among homeless men in a New York City shelter.** Arch Intern Med, 150:2030-6, 1990.

This study characterizes a sample of the homeless population residing in a congregate shelter in New York City with regard to HIV prevalence, immunosuppression, incidence of active and latent tuberculosis, syphilis, hepatitis B, opportunistic infections, and active drug use. Sixty-two percent of a selected sample of 169 homeless men using a clinic at St. Vincent's Hospital and Medical Center tested positive for HIV and 18% had active tuberculosis. Seropositivity for HIV correlated significantly with intravenous drug use and active tuberculosis. Those with AIDS and ARC accounted for 54% and 33% of all cases of tuberculosis. Results indicate a high degree of compliance with medication regimens and follow-up visits among the shelter residents, suggesting a significant degree of knowledge, awareness, and personal concern regarding HIV infection among homeless men. The authors recommend medically appropriate housing for such homeless persons, with provision of expanded HIV antibody testing, counseling, and medical services in shelters.

## 1989

Brickner PW, Torres RA, Barnes M, Newman RG, Des Jarlais DC, Whalen DP, Rogers DE. **Recommendations for control and prevention of Human Immunodeficiency Virus (HIV) infection in intravenous drug users.** Ann Intern Med, 110(10):833-7, 1989.

Considerable evidence indicates that intravenous drug users are emerging as the group at greatest for both acquiring and spreading HIV infection. The authors discuss voluntary and mandatory HIV testing, free distribution of needles and syringes to intravenous drug users, increasing the opportunity for drug treatment, and education as methods to control infection in intravenous drug users.

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Corby NH, Rhodes F, Wolitski RJ. **HIV serostatus and risk behaviors of street IVDUs.** Int Conf AIDS, 5:106 (abstract no. T.A.P.42), June 4-9, 1989.

**OBJECTIVE:** To determine pre-intervention seroprevalence, drug usage, daily activities, sexual behaviors, and AIDS attitudes among street intravenous drug users (IVDUs) in Long Beach, Calif. **METHODS:** Personal interviews were conducted with 325 street IVDUs (66% male, 34% female) between June and September 1988; 44% were white, 35% black, 16% Hispanic, and 5% Asian/other. HIV-antibody serostatus was obtained on 193 persons. **RESULTS:** Drugs commonly injected were heroin (75%), cocaine (34%), speedballs (28%), and amphetamines (13%). Needles were shared by 88%. Seventy percent of IVDUs said they cleaned their works at least three-fourths of the time. Of those cleaning, 73% reported using bleach or alcohol and 27% using water alone. Forty-two percent reported having non-IVDU sex partners, and 18% said the partner did not know of their drug use. Thirty-eight percent of IVDUs were prostitutes or had traded sex for drugs. Seventy percent of IVDUs rated good health as highly important. Sixty-one percent had been in a drug-treatment program at some time (40% within the prior nine months). Ten (5.2%) of the 193 persons tested for HIV-antibody were seropositive (nine males, one female). There was no difference between the proportion of homosexual/bisexual vs. heterosexual males with respect to serostatus. HIV serostatus, sexual orientation, or whether one was a prostitute bore no significant relationship to reported degree of concern about AIDS or change in sexual

behavior because of AIDS. **CONCLUSION:** The large number of IVDUs who indicated health was of high personal importance, who cleaned needles with bleach/alcohol, and who reported recent drug treatment suggests this population will be receptive to targeted AIDS-prevention efforts.

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Kouzi A, Des Jarlais DC, Friedman SR, Tross S, Abdul-Quader A. **Determinants of contraceptive practices among intravenous drug users in New York City.** Int Conf AIDS, 5:873 (abstract no. Th.E.P.4), June 4-9, 1989.

**OBJECTIVE:** To identify factors associated with contraceptive use among IV drug users (IVDUs) in New York City. **METHODS:** Structured interviews with 403 IV drug users recruited through street outreach in New York City produced information about contraception, AIDS risk behavior, and socio-demographic characteristics. **RESULTS:** Forty-two percent (167/403) reported current use of contraceptives or other forms of birth control. Thirty-three percent (135/403) used condoms. Contraception was significantly positively associated with education, plans to have children, employment, number of sex partners, currently being in a sexual relationship, being non-Hispanic, and engaging in drug injection risk reduction practices. Contraception tended to be greater among younger and non-homeless subjects, but was not related to gender, having children, levels of alcohol use, or past psychiatric history. The number of sexual partners, current sexual relationship, race, and making drug related behavior changes remain significant. Similarly, for condom-use alone, the number of sexual partners, drug injection behavior changes, and involvement in a sexual relationship were significant predictors. **CONCLUSIONS:** Among IVDUs, there is considerable contraceptive and condom use but not nearly enough to prevent pregnancy. Almost half of the sample practiced at least one form of contraception or birth control in an average month. These findings associating education, working, and contraception are consistent with the findings from general population surveys. Since contraception consisted mostly of barrier methods such as the use of condoms, this should serve to retard HIV spread through heterosexual and perinatal transmission.

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Serrano Y, Johnson P. **Women injection drug users: issues and strategies experiences in New York City adapt.** Int Conf AIDS, 5:706 (abstract no. W.D.O.12), June 4-9, 1989.

**OBJECTIVE:** To describe the issues and strategies intravenous (IV) drug using women encounter in their attempt to reduce risk of HIV infection to themselves, their sexual partners and their children. To examine risk-taking lifestyles, needle sharing and sexual behavior, attitudes and beliefs. **METHODS:** Data was collected through direct observation and educational intervention of IV drug using women, in specific high drug trafficking areas in New York City, over a four-year period. The women were observed by teams of ex-users, outreach workers and workers referred to as facilitators. Most women were primary opiate injectors using heroin as their main drug, but also injected cocaine and smoked crack. Entrance was made into the women's informal networks (via street corners, shooting galleries, crack houses, shelters, "strolls,"). Rapport was established, through incentives (i.e., kits containing daily living items such as toothbrush and toothpaste, underwear, condoms), bleach kits, movies, dinners, manicure/facial sessions and provided them with intensive street level AIDS prevention and risk reduction skills (cleaning needle and syringes and proper condom use). Second, by working with addicted women, who are forced to engage in "survival sex" (sex for drugs) to maintain their drug habit. These women were approached in their environment, the street, the "stroll," the drop in store front, in cars and other areas. A questionnaire was applied to a group of the women as well as a condom survey to determine the number of clients served and the number of condoms used per day. **RESULTS:** The mechanism available to IV drug using women to support their drug habits are limited. They must engage in survival sex to procure money for drugs, resulting in unsafe sexual behavior. Addicted women rarely seek counseling, do not plan pregnancies, have no regular medical doctor, and rely on emergency rooms for medical treatment. Many



don't engage in birth control and most don't realize they are pregnant until the 4<sup>th</sup> or 5<sup>th</sup> month of pregnancy, restricting the options available to them and delaying pre-natal care. **CONCLUSION:** Through community organization, women IV drug users can be motivated to modify their behavior. Strategies for interventions and reaching women who are IV injectors is a major problem in trying to curb the spread of HIV among IV drug using women. In summary, addicted women are in dire need of specific interventions that will allow them to survive the HIV epidemic. This involves massive street outreach by individuals who are knowledgeable about their lifestyles.

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Weibel W, Lampinen T, Chene D, Jimenez D, Johnson W, Ouellet L. **Risk of HIV infection among homeless IV drug users (IVDUs) in Chicago.** Int Conf AIDS, 5:86 (abstract no. M.A.P.50), June 4-9, 1989.

**OBJECTIVE:** To examine the relationship between homelessness and HIV infection in a group of active intravenous drug users (IVDUs) not in treatment. **METHODS:** Analysis of 404 face-to-face interviews conducted between March 1988 and August 1988 was performed as part of a large-scale prevention and education project funded by the National Institute on Drug Abuse. IVDUs were recruited using street-based indigenous outreach workers and were paid for participation. **RESULTS:** Fully 23.6% of the sample considered themselves homeless. Homeless IVDUs were significantly more likely to be HIV-seropositive (33.7%) than non-homeless IVDUs (20.5%). This relationship was found across all levels of reported needle-sharing partners in the six months prior to interview (Table 1). **TABULAR DATA, SEE ABSTRACT VOLUME.** **CONCLUSION:** Homeless IVDUs are overrepresented among those reporting the greatest numbers of needle-sharing partners. These IVDUs are more likely to be seropositive, suggesting that homelessness exerts an independent effect upon risk for HIV-seropositivity. This relationship was most significant for Puerto Rican IVDUs. The relationship of other risk factors is discussed.

## 1987

Torres RA, et al. **Homelessness among hospitalized patients with the Acquired Immunodeficiency Syndrome in New York City.** J Amer Med Assoc, 258(6):779-80, 1987.

The study reported in this article sought to determine the prevalence of homelessness among hospitalized AIDS patients. The authors retrospectively reviewed the medical records of all patients (a total of 231) in whom the diagnosis of AIDS was made at a New York City hospital over a four-year period. The findings suggest that intravenous drug users constitute the major pool of HIV infection in public shelters and on the streets of large urban centers. Once hospitalized, they pose significant management and discharge problems. Increasing numbers of AIDS patients remain hospitalized solely because of homelessness, and others are inappropriately discharged to shelters or the streets. The authors contend that cross-sectional and prospective studies are needed to investigate the prevalence of AIDS, AIDS-related conditions, and HIV seropositivity among residents of shelters.